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$BLK = (A - B) - (C - D)$

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TITLE : QUANTIFICATION METHOD FOR  
SILICA

ABSTRACT : PURPOSE: To correctly quantify trace silica in sample water by correctly detecting only the absorbance via the silica in a color liquid, and using it as the blank test value of a reagent.

CONSTITUTION: A preset quantity of a color liquid CL containing ammonium molybdate containing silica is mixed under acidity, and dodecamolybdosilicate is generated to determine the silica concentration in sample water. A decomposition/stabilization liquid AL is added, dodecamolybdophosphate is decomposed, then a reducing liquid RL is added to reduce the dodecamolybdosilicate into molybdate blue. The absorbance of the sample water at this time is measured. The measured value of the absorbance of the sample water is corrected by the blank test value BLK of a reagent obtained by the equation from the absorbance of A-D measured by adding each reagent to water in sequence, where A is CL, AL, RL twice the preset quantity, B is AL and CL, RL twice the preset quantity, C is the preset quantity of CL, AL, and RL, and D is AL and the preset quantity of CL, RL. The blank test value of the reagent can be correctly determined, and the silica in the sample water can be precisely quantified.

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